INSTRUCTIONS

-J01515 REV. 3-31-99

Kit Number 91531-00

ACCESSORY FAN KIT

General

This kit fits 1992 and later FLHR and FLHT models.

KIT CONTENTS

See Service Parts on pages 4-6 for kit contents.

Installation

NOTE

This cooling fan is designed to provide supplemental cooling for motorcycles subjected to long periods of idling/parade duty. The fan is mounted on the left side of the engine in the area where the horn is mounted. The horn must be removed and relocated.

1. Remove seat.

⚠WARNING

To avoid accidental start-up of motorcycle, and possible personal injury, disconnect the battery cables (negative cable first) before performing any of the following procedures. If the positive cable should contact ground with the negative cable installed, the resulting sparks may cause a battery explosion and could result in death or serious injury.

2. Disconnect battery, negative cable first.

Remove And Relocate Stock Horn (FLHT)

1. Refer to applicable Service Manual, Section 8. Remove horn and its bracket. Disconnect wires from horn and remove large nut that secures horn to horn bracket. Set horn aside.

2. Refer to FLT Service Manual, Section 2 and remove outer fairing.

3. See Figure 1. Locate connector [2], refer to FLT Service Manual, Appendix A, Deutsch Electrical Connectors. Follow directions given and remove socket terminal from cavity 6 (yellow/ black wire). Cut socket terminal from wire and cover wire end with electrical tape.

4. See Service Parts illustration. Locate horn relocation harness (14) from kit and insert socket terminal (on yellow/black wire) into cavity 6 of connector [2B]. Plug two halves of connector together.

5. See Figure 1. Route black wire with double spade terminal (on horn relocation harness) to cigarette lighter. Disconnect black wire from cigarette lighter. Connect double spade terminal to cigarette lighter and reconnect stock black wire on the “open” double spade terminal.

6. Connect the two remaining terminals on the horn relocation harness to the horn terminals. The horn is not polarity sensitive so leads may be attached to either horn terminal.

7. See Service Parts illustration. Locate two horn brackets (12) and flat rubber washer (7). Slip rubber washer on horn stud. Take two horn brackets and install large hole end on horn stud. Secure with metric M6 nut (16).

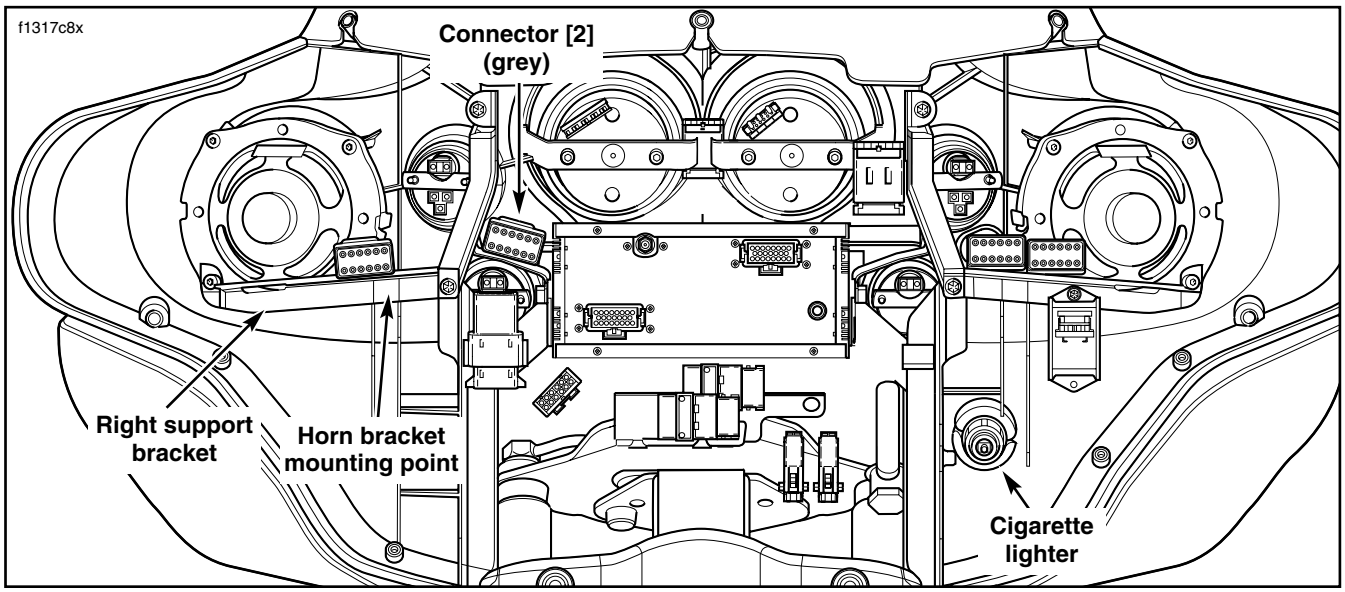


Figure 1. Outer Fairing Removed (FLHT Models)

8. See Figure 1. Mount horn to right support bracket with 10-24x1/2 screw (4) and washer (10). Thread screw into PEM nut. If right support bracket does not have PEM nut drill a 7/32 in. hole at the location shown in Figure 2 and use 10-24 nut (17),washers (10) and screw (4) to mount horn.

9. Position horn so horn cover opening is facing downward.

10. Cover terminals on stock horn leads with electrical tape and position leads so they will not be damaged. Secure leads with a cable strap if necessary.

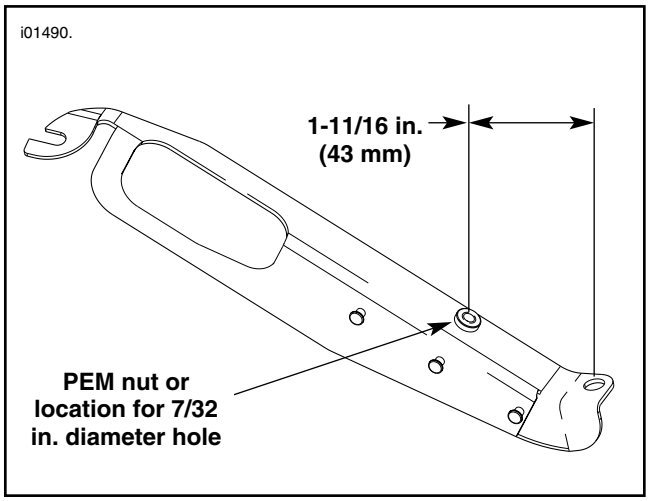


Figure 2. Horn Mounting Hole Location (FLHT)

Remove And Relocate Stock Horn (FLHR)

1. Refer to applicable Service Manual, Section 8. Remove horn and its bracket. Disconnect wires from horn and remove large nut that secures horn to horn bracket. Remove horn from chrome cover. Set horn aside.

2. See Service Parts illustration. Locate three horn brackets (12) and flat rubber washer (7). Slip rubber washer on horn stud. Take three horn brackets and install large hole end on horn stud. Secure with metric M6 nut (16).

3. Remove left front fuel tank Torx screw. Mount horn (without chrome cover) at left front of fuel tank with Torx screw.

4. Route stock horn wires forward and reconnect to horn.

Fan Installation

REMOVING STOCK UPPER ENGINE MOUNTING BRACKET

1. On carburated models refer to applicable Service Manual, Section 4 and remove enrichener control from upper engine mounting bracket.

2. Remove screw securing rear of fuel tank and gently raise fuel tank to gain access to upper engine mounting bracket. Place suitable blocking under tank.

3. Remove bolt attaching stabilizer link to upper engine mounting bracket. Retain bolt, nut and washer for reattaching stabilizer link later.

3. Remove two bolts and washers securing upper engine mounting bracket to front and rear cylinder heads. Retain bolts and washers for attaching new upper engine mounting bracket from kit.

4. Note position of fuel/vacuum hoses. Remove upper engine mounting bracket.

CONNECTING ACCESSORY FAN HARNESS

1. See Figure 3 and Service Parts illustration. Connect ring terminal on accessory fan harness (13) to silver stud on main circuit breaker.

2 Connect socket connector [4B] on accessory fan harness to pin connector [4A] P&A accessory connector.

CAUTION

Due to the different air cleaner backplate configurations, take care to mount the thermostat in a suitable location in the next step. Make certain thermostat will not contact cylinder head or prevent normal mounting of backplate. Orient thermostat so its leads are routed away from components that could damage them.

3. Refer to applicable Service Manual Section 4 and remove air cleaner backplate. Position the thermostat (part of accessory fan harness) on backplate to rear of carburetor as described in “CAUTION” above. Mark thermostat mounting hole locations on backplate. Drill two 5/32 in. holes in backplate and mount thermostat with 6-32x3/8 in. screws (3) and nuts (6).

4. Mount fan relay in a vertical position (mounting hole up) and secure with an existing (stock) mounting screw or secure with a cable strap from kit.

MOUNTING FAN ASSEMBLY

1. See Service Parts illustration. Install fan mount (2) (upper engine mounting bracket from kit) on front and rear cylinder heads and secure with stock bolts and washers. Tighten bolts to 28-35 ft-lbs.(38-47.5 Nm).

2. Install upper stabilizer link on upper engine mounting bracket with stock bolt and washer. **On carburated models mount enrichener bracket to underside of upper engine mounting bracket. Check that fuel/vacuum hoses are routed properly.**

3. Secure stabilizer link and if applicable, enrichener bracket, with stock bolt, nut and washer. Tighten bolt to 18-22 ft-lbs.(24-30 Nm).

4. Insert rubber mount stud (8) through mounting hole in fan mount (2) and secure with 1/4 in ID washer (9) and 1/4-20 nut (18). Tighten nut to 72-96 in-lbs (8-11 Nm).

5. Repeat Step 4 for other mounting hole in fan mount (2).

6. See Service Parts illustration. Insert rubber mount stud (8) through bottom mounting hole in fan cover assembly and secure with 1/4 in ID washer (9) and 1/4-20 nut (18). Tighten nut to 72-96 in-lbs (8-11 Nm).

7. Position fan assembly so holes in upper mounting tabs on fan cover assembly engage rubber mount studs in upper engine mounting bracket.

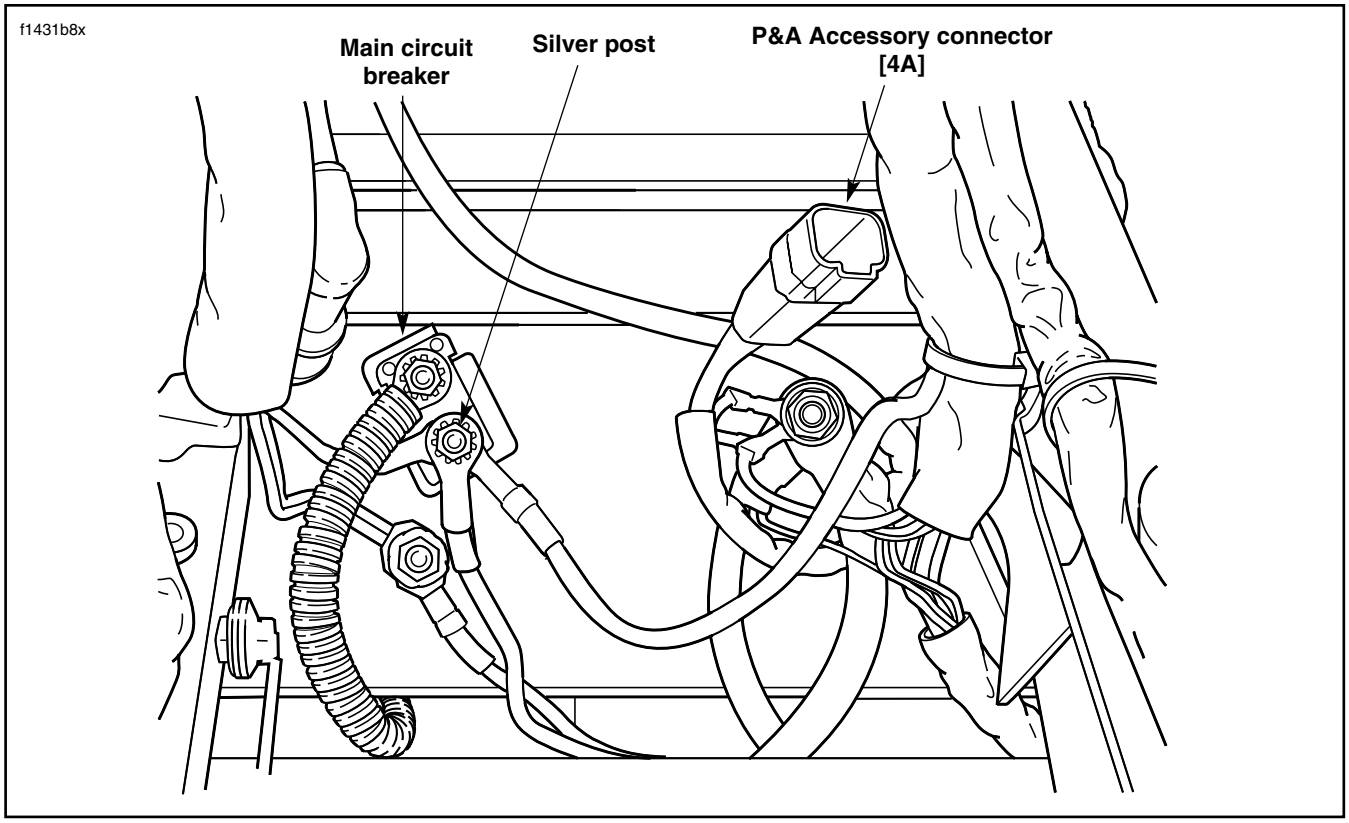


Figure 3. View With Seat Removed

8. Install 1/4 in. inside diameter (ID) flat washers (9) and 1/4-20 locknuts (18) on upper studs. Tighten finger tight.

9. See Service Parts illustration. Install lower mounting bracket (5), 1/4 in. ID flat washer and 1/4-20 locknut on rubber mount stud. Tighten finger tight.

10. Remove upper front bolt and washer from inner primary housing. Insert bolt through lower mounting hole in lower mounting bracket and tighten to 18-21 ft-lbs (24-28 Nm).

11. Tighten the three 1/4-20 fan mounting nuts to 72-96 in-lbs (8-11 Nm).

12. Route fan motor leads over upper engine mounting bracket at location indicated with a dotted line in Service Parts illustration. Install a cable strap to secure fan motor leads as shown.

CAUTION

Make certain motor leads are connected as specified in the next step. Reversed leads would reverse fan rotation and decrease cooling efficiency which could cause engine damage.

13. Connect motor leads to the sealed butt connectors on the accessory fan harness (13). Connect as follows:

    Blue fan motor lead to **Black** harness lead

    Black fan motor lead to **Blue/Black** harness lead

14. Refer to FLT Service Manual, Appendix A, “SEALED BUTT SPLICE CONNECTORS” for instructions on crimping and heating connectors to melt the sealant.

15. On carburated models mount enrichener control to enrichener bracket.

16. See Service Parts illustration. Check that a cable strap secures fan motor leads at fan mount (2). Arrange accessory fan harness under seat so harness and fuseholder will not be pinched/damaged when seat is installed. Secure harness with cable straps from kit.

17. Carefully remove blocking from under rear of fuel tank and install screw at rear of fuel tank .

⚠WARNING

Always connect the positive battery cable first. If the positive cable should contact ground with the negative cable installed, the resulting sparks may cause a battery explosion resulting in personal injury and could result in death or serious injury.

14. Reconnect battery, positive cable first.

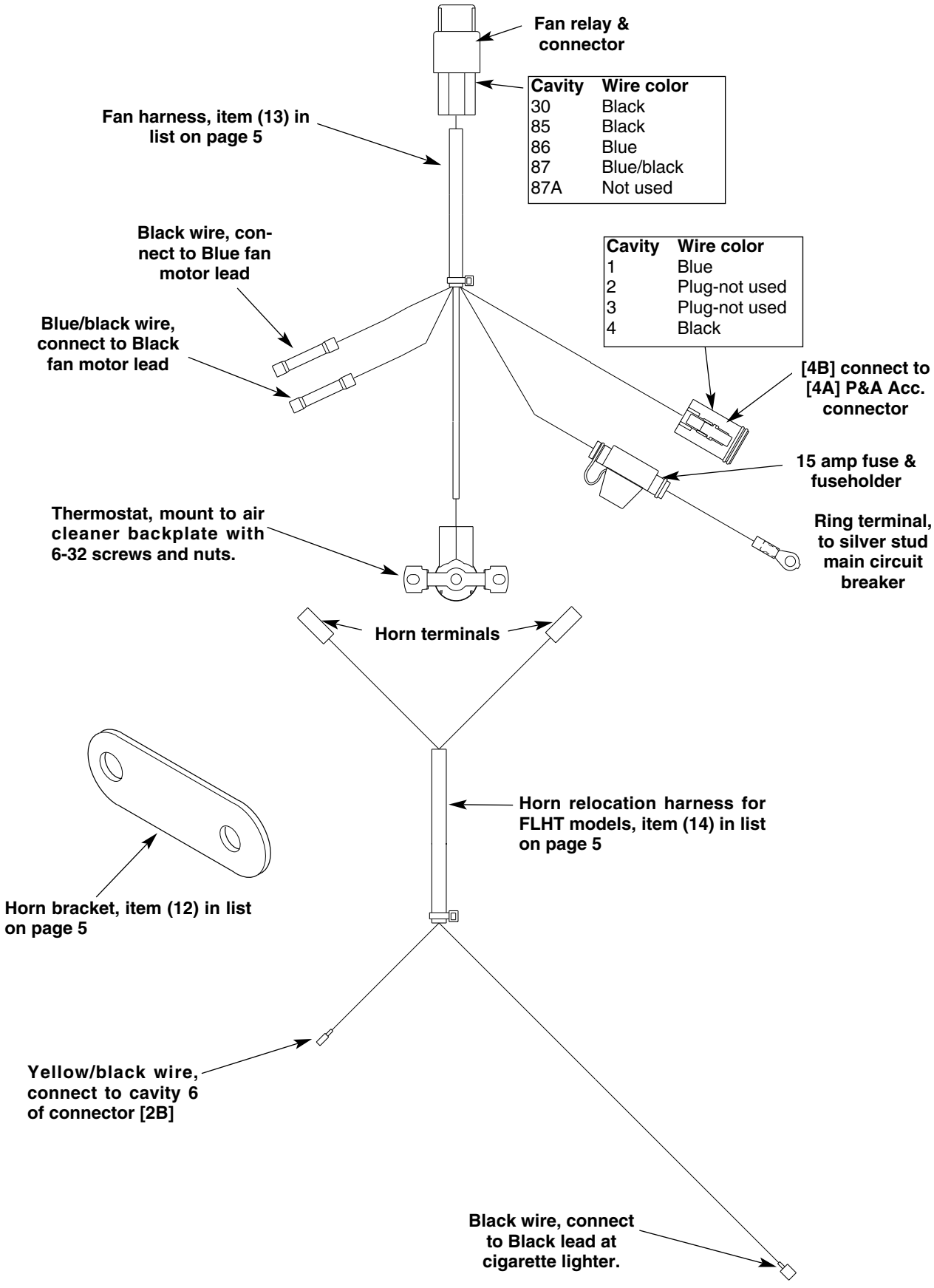
15. Install seat.

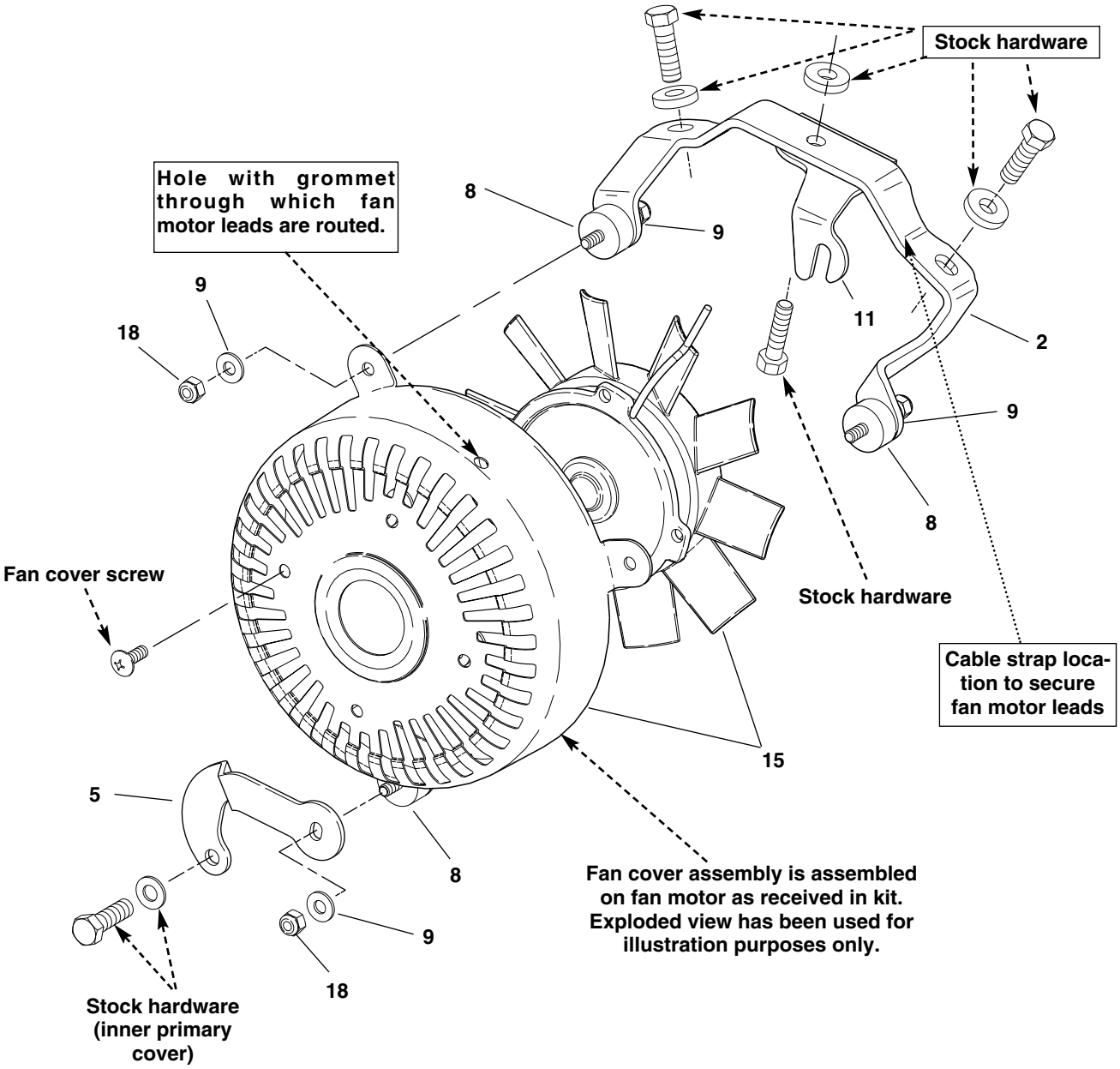
⚠WARNING

After installing seat, pull upward on front of seat to be sure it is locked in position. If seat is loose, it could shift position during vehicle operation and startle the rider, and could result in death or serious injury.

NOTE

The cooling fan is thermostatically controlled and will only operate when the thermostat senses cooling air temperature of approximately 140° F. Cooling air movement is from left to right, that is, air is drawn in through slots in fan cover and blown across cylinders and cylinder heads.


Fan relay & connector
Cavity Wire color
30 Black
85 Black
86 Blue
87 Blue/black
87A Not used
Fan harness, item (13) in list on page 5
Black wire, connect to Blue fan motor lead
Blue/black wire, connect to Black fan motor lead
Cavity Wire color
1 Blue
2 Plug-not used
3 Plug-not used
4 Black
[4B] connect to [4A] P&A Acc. connector
15 amp fuse & fuseholder
Ring terminal, to silver stud main circuit breaker
Thermostat, mount to air cleaner backplate with 6-32 screws and nuts.
Horn terminals
Horn relocation harness for FLHT models, item (14) in list on page 5
Horn bracket, item (12) in list on page 5
Yellow/black wire, connect to cavity 6 of connector [2B]
Black wire, connect to Black lead at cigarette lighter.



Item	Description	Qty. *	Part No.	Item	Description	Qty. *	Part No.
1	Cable strap	3	10065	10	Washer, #10	2	6716
2	Fan mount, (top engine mount)		not sold	11	Bracket , enrichener control		not sold
3	Screw, 6-32x3/8 in.	2	2517	12	Horn bracket, straight	3	not sold
4	Screw, 10-24x1/2 in.		2592	13	Fan harness		not sold
5	Bracket, lower mounting		not sold	14	Horn relocation harness		not sold
6	Nut, 6-32	2	60031-61	15	Fan assembly		not sold
7	Washer, rubber, 1/4x3/4x3/64		6265	16	Nut, flanged M6		7495
8	Mount, rubber	3	not sold	17	Nut, 10-24		7624
9	Washer, 1/4x5/8x1/16	6	6703	18	Nut, 1/4-20	6	7686

In addition to the above Service Parts, the following Repair kits are available at your Harley-Davidson dealer:

Fan motor Part no. 74452-00
Thermostat Part no. 74453-00
Fan assembly Part no. 74454-00